

LIPIEC, T.

Problem of obtaining of proper sediment for analysis with special reference to the method of so-called indirect separation. 11 Suppl.: 112-114 1955.

1. Zakład Chemii Nieorganicznej i Analitycznej Akademii Medycznej,
Lodz.

(CHEMICAL ANALYSIS,
indirect sedimentation in)

LIPIEC, T.

7
JB ✓ Application of organic reagents for obtaining indirectly
analytical precipitates (in homogeneous solutions). T.
✓ Lipiec. *Przemysł Chem.* 11, 875-7(1955).—A review with
no references, A. Libacki

2-11-54

JS

LIPIC, IADYSC

7 5

Spectrophotometric determination of the dissociation constant of a complex compound of iron(III) with diethyl 3,4-dioxohexanedioate (HKET). — Two optical methods are described, applied to detn. of the dissociation const. of complex compd. of Fe^{+++} cations with di-Et 3,4-dioxohexanedioate (HKET). The results obtained by the 2 methods agree. It is stated that the dissociation const. of $Fe(KET)_3 = K_d = 2.47 \times 10^{-4}$. One method of detg. the molar absorption coeff. is described. This method was applied for molar absorption coeff. detn. of $Fe(KET)_3$. The molar absorption coeff. for max. absorption ($\lambda = 480 m\mu$) $E = 1.93 \times 10^3$. P. M. B.

POLAND/Chemical Technology. Chemical Products
and Their Applications. Medicinal Sub-
stances. Vitamins. Antibiotics.

H

Abs Jour : Ref Zhur-Khiniya, No 6, 1959, 20544

Author : Lipiec, Tadeusz; Ramotowski, Stefan

Inst : -

Title : Use of the Amide of Thioacetic Acid as a
Reagent for Determining the Contamination
of Medicinal Preparations by Heavy Metals.

Orig Pub : Acta polon. pharmac., 1957, 14, No 3,
185-190

Abstract : No abstract.

Card : 1/1

14-87

LIPIEC, T.

7
~~Bisthiosemicarbazones of α -diketones and their complexes with ions of heavy metals.~~ ~~Wojciech Górski~~
~~Marion Zolnierowicz, and Tadeusz Lipiec. Chem. Anal.~~
~~(Warsaw) 3, 847-50 (1968). $-(C_2H_5CO)_2$ (1 mole)~~
~~in EtOH heated 3 hrs. on a water bath with 2 moles NH_2~~
 ~~$CSNHNH_2$ in H_2O gave $[C(C_2H_5CO)_2]:NNHCSNH_2$ (I).~~
~~m. 210° (decompn.) [dioxane (II)]. I in II formed with~~
 ~~Ag^+ , Hg^{2+} , Hg^{2+} , and Cu^{2+} colored ppts. sol. in varying~~
~~degrees in Et_2O , $CHCl_3$, and Me_2CO . I boiled in EtOH gave~~
 ~~$EtO_2CCH_2C:N.NH.C(S).N:CCH_2CO_2Et$ (III), m. 182°.~~
~~III did not form complexes. P. Dreyfus~~

5
 1-929(NB)

ant

LIPIEC, T.; PETRI, S.

Argentometric determination of thiocetamide (AKT) by the potentiometric method.
p. 191.

CHEMIA ANALITYCZNA. (Komisja Analityczna Polskie Akademii Nauk i Naczelna
Organizacja Techniczna) Warszawa. Poland. Vol. 4, no. $\frac{1}{2}$, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 8, August 1959
Uncla.

LEPIEC, T.; PETRI, S.

Polarographic determination of the thallium content of biological material.
p. 197.

CHEMIA ANALITYCZNA. (Komisja Analityczna Polskiej Akademii Nauk i Naczelna
Organizacja Techniczna) Warszawa. Poland. Vol. 4, no. $\frac{1}{2}$, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, August 1959
Uncla.

LIPIEC, T. ; PETRI, S.

Argentometric determination of thioatamide (AKT) by the potentiometric method.
p. 191.

CHIMIA ANALITYCZNA. Warszawa, Poland, No. 8, August 1959.

Monthly List of East European Accessions (EFAI) LC, Vol. 8, No. 11
November 1959.

Uncl.

LIPIEC, Tadeusz; KORKUC, Anna; PETRI, Stanislaw

Thioacetic acid amide, its chemical, analytical and physiological properties. Chem anal 6 no.3:287-306 '61.

1. Katedra Chemii Nieorganicznej i Analitycznej, Wydział Farmaceutyczny, Akademia Medyczna, Lodz.

LESZ, Katarzyna; WIECZORKIEWICZ, Helena; LIPIEC, Tadeusz

Indirect complexometric determination of thiocompounds.

I. Determination of thioacetamide (AKT), and thiourea (TM).
Chem anal 6 no.6:1033-1038 '61.

1. Department of Inorganic and Analytical Chemistry, Faculty
of Pharmacy, Academy of Medicine, Lodz.

LIPIEC, Tadeusz

"Qualitative inorganic analysis" by Marcell Struszynski. Reviewed
by Tadeusz Lipiec. Roczniki chemii 36 no.1:183-184, '62.

ZOMMER, Sabina; LIPIEC, Tadeusz

Determination of isonicotinic acid hydrazide in various substances and tablets with Cu^{2+} ions in the presence of acetone. Acta pol. pharm. 20 no.3:229-232 '69.

1. Z Katedry Chemii Nieorganicznej i Analitycznej Akademii Medycznej w Łodzi. Kierownik: prof. dr T. Lipiec.
(ISONIAZID) (CHEMISTRY, PHARMACEUTICAL)
(INDICATORS AND REAGENTS) (COPPER)
(ACETONE) (TABLETS)

POLAND

MAROSZYŃSKA, Krystyna, dr; LIPIEC, Tadeusz, prof. dr.

Dept. of Inorganic and Analytical Chemistry, Lódź Medical Academy
(Pharmacy Section), Lódź (Katedra Chemii Nieorganicznej i Analitycznej
Wydziału Farmaceutycznego Akademii Medycznej, Lódź) - (for both)

Warsaw, Chemia analityczna, No 3, May-June 1966, pp 515-522

"Complexes of L-aspartic acid β -hydrazide with copper(II) ions."

POLAND

LESZ, Katarzyna, dr; LIPINC, Tadeusz, prof. dr

Dept. of Inorganic and Analytical Chemistry, Lodz Medical Academy
(Pharmacy Section), Lodz (Katedra Chemii Nieorganicznej i Analitycznej
Wydziału Farmaceutycznego Akademii Medycznej, Lodz) - (for both)

Warsaw, Chemia analityczna, No 3, May-June 1966, pp 523-529

"Spectrophotometric studies of the reactions of TETD with heavy
metal ions and their application in analysis. Part 1: Spectro-
photometric studies of the reactions of TETD with copper(II) and
silver(I) ions."

L 00924-67

ACC NR: AP6035457

(N) SOURCE CODE: PO/0099/66/040/004/0541/0545

2/
8

AUTHOR: Oleszkiewicz, Jolanta and Lipinska, Jadwiga of the Department of Inorganic and Analytical Chemistry, Division of Physical Chemistry, Faculty of Pharmacy, School of Medicine (Zaklad Chemii Fizycznej Katedry Chemii Nieorganicznej i Analitycznej)
Polarographic Investigations of Thallium(I) Complexes with Thiocyanate Ions"

Warsaw, Roczniki Chemii, Vol 40, No 4, 1966, pp 541-545.

Abstract (Authors' English abstract modified): The dependence of the half-wave potential of thallium (I) on the KSCN concentration was studied. The instability constants of the complexes formed were determined by Yatsimirskii's method.

Orig. art. has: 3 figures and 1 table. [JPRS: 36,862]

TOPIC TAGS: polarographic analysis, thiocyanate, thallium compound

SUB CODE: 07 / SUMM DATE: 24 May 65 / OTH REF: 011 / SOV REF: 004

Card 1/1

awm

LIPIKHIN, N.P.

KAZARNOVSKIY, I.A.; LIPIKHIN, N.P.; TIKHOMIROV, M.V.

Isotopic oxygen exchange between a free hydroxyl radical and
water. Zhur.fiz.khim. 30 no.6:1429-1430 Je '56. (MLRA 9:10)

1..Fiziko-khimicheskiy institut imeni L.Ya. Karpova, Moskva.
(Oxygen--Isotopes) (Hydroxyl group)

LIPIKHIN, N. P., BAGDASARYAN, Z. A. and KASARNOVSKIY, I. A.

"A New Source of Free Hydroxyl Radicals in Solutions," report presented at the All-Union Conference on Chemical Kinetics, 23 June 1955.

Nature (British publication), Vol. 178, No. 4524, 14 July 1956, p. 101

LIPKIN, N., KASARNOVERIY, I. and TIKHOMIROV, M.

"Isotopic Exchange of Oxygen Between Free Hydroxyl Radicals and Water,"
Nature (British publication), Vol. 178, No. 4524, 14 July 1956.

English article.

Laboratory for Inorganic Chemistry, Karpov Inst. of Physical Chemistry, Moscow

SOV/2c-126-5-30/57

AUTHORS: Kazarnovskiy, I. A., Corresponding Member, Academy of Sciences, USSR, Lipikhin, M. P., Tikhomirov, M. V.

TITLE: Isotopic Exchange of Oxygen Between the Free Hydroxyl Radical and Water (Izotopnyy obmen kisloroda mezhdru svobodnym gidroksil'nyim radikalom i vodoi)

PERIODICAL: Doklady Akademii Nauk SSSR, 1950, Vol. 150, No. 5, pp.1070-1071 (USSR)

ABSTRACT: The free hydroxyl radical plays an important rôle in radiation chemistry and in the theory of the oxidation processes, as it is an intermediate. Only few and contradicting data exist on its reactivity (Refs 1 - 4). The authors investigated the reaction mentioned in the title ($O^{16}H + H_2O^{18} \rightarrow H_2O^{16} + O^{18}H$). Potassium ozonide was used as a new source of the free OH radical (Refs 5, 6). The potassium ozonide is instantaneously decomposed by water at room temperature and at 0° under violent oxygen separation. The reaction velocity of the hydroxyls amounts to the 4-5fold of its dimerization velocity. The experiments showed that the oxygen produced in this connection is enriched with the isotope O^{18} . The reaction was carried

Card 1/3

Isotopic Exchange of Oxygen Between the Free Hydroxyl Radical and Water

out in the apparatus (Fig 1 A). Table 1 contains the results of the determination of the isotopic composition of the oxygen which escapes during the decomposition of potassium ozonide by heavy water, as well as the found degree of exchange. The degree of exchange between the free OH-radical and water at +20° and at 0° amounts to approximately 10% and is independent of the pH of the solution, as is shown. This confirms the actual exchange between the free OH and H₂O, and not that between the OH-ions and the hydroxyl radicals. Moreover the isotopic composition of the oxygen in an decomposing peroxide was determined. It was found that the enrichment of H₂O₂ with isotope O¹⁸ was several times greater than that of oxygen liberated directly during the decomposition of KO₃ by heavy water. Table 2 shows data on the isotopic composition of oxygen in the superoxide. Therefore we may conclude that this oxygen is enriched with the isotope O¹⁸ by about 10-fold (3.4 mol on the average). This is in good agreement with the assumption that during the decomposition of KO₃ the oxygen is formed from an intermediate actively formed. The enrichment of the oxygen in the superoxide (containing 1/2 of the oxygen) is on the other hand different according to a normal and not according to an

Chem 2/3

NOV 20-120-5-20-6

Isotopic Exchange of Oxygen Between the Free Hydroxyl Radical and Water

Grotthuss mechanism. There are 1 figure, 2 tables, and 9 references, 5 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova
(Scientific Physicochemical Research Institute imeni L. Ya. Karpov)

SUBMITTED: February 18, 1956

1. Ozone-potassium compounds--Decomposition 2. Oxygen isotopes
--Exchange reactions 3. Hydroxyl radicals--Sources 4. Hydroxyl
radicals--Chemical effects 5. Heavy water--Chemical reactions

Card 3/3

KESSLER, Yu. M.; LIPIKHIN, N. P.; KUCHINSKIY, Ye. M.

Solubility in the system water - sulfuric acid - p-chloro-
benzenesulfonic acid. Zhur. ob. khim. 32 no.12:3871-3876
D '62. (MIRA 16:1)

(Benzenesulfonic acid) (Sulfuric acid)
(Solubility)

KAZARNOVSKIY, I.A.; LIPIKHIN, N.P.; KOZLOV, S.V.

Reaction of free hydroxyl radicals and oxygen with acetic acid
vapors. Izv.AN SSSR Otd.khim.nauk no.5:956 My '63. (MIRA 16:8)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova.
(No subject headings)

KUCHINSKIY, Ye.M.; LIPIKHIN, N.P.; FLISSKIY, M.M.

Study of the porous structure of graphite electrodes. Zhur.
prikl. khim. 37 no.2:460-462 F '64.

(MIRA 17:9)

L 64176-65 EWG(j)/EWT(m)/EPF(c)/EWP(j)/EWP(t)/EWP(b) IJP(c)/RPL
 ACCESSION NR: AP5019786 JD/NW/RM UR/0062/65/000/007/1312/1312
 541.124 + 541.51

AUTHOR: Kazarnovskiy, I. A.; Lipikhin, N. P.

TITLE: Interaction between free hydroxyl radicals and mechanism of formation and decomposition of hydrogen peroxide in solutions

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1312

TOPIC TAGS: hydroxyl radical, hydrogen peroxide, free radical

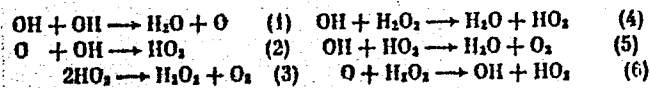
ABSTRACT: The authors studied at 0° the reaction of hydroxyl radicals (generated by potassium ozonide as follows: $KO_3 + H_2O \rightarrow KOH + OH + O_2$) with hydrogen peroxide solutions over a wide concentration range (from pure water to a 9.3 M solution of hydrogen peroxide) with vigorous stirring. The change in H_2O_2 content was determined by titrating with a 0.1 N $KMnO_4$ solution. It is postulated that the formation of hydrogen peroxide from hydroxyl radicals occurs in accordance with the equations $OH + OH \rightarrow H_2O + O$; $O + OH \rightarrow HO_2$; $2HO_2 \rightarrow H_2O_2 + O_2$, and the overall equation $6OH \rightarrow 2H_2O + H_2O_2 + O_2$, not the equation $OH + OH \rightarrow H_2O_2$, employed in radiation chemistry. The four paths established by the authors for the reactions of hydroxyl radical (I)

Card 1/2

L 64176-65

ACCESSION NR: AP5019786

6OH + 2H₂O + H₂O₂ + O₂; (II) 4OH + 2H₂O + O₂; (III) and (IV) 2OH + H₂O₂ + 2H₂O + O₂ can be explained on the basis of the following six elementary steps:



"We thank M. I. Temkin for carrying out the kinetics calculations." Orig. art. has: 6 formulas.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

SUBMITTED: 15May65

ENCL: 00

SUB CODE: GC

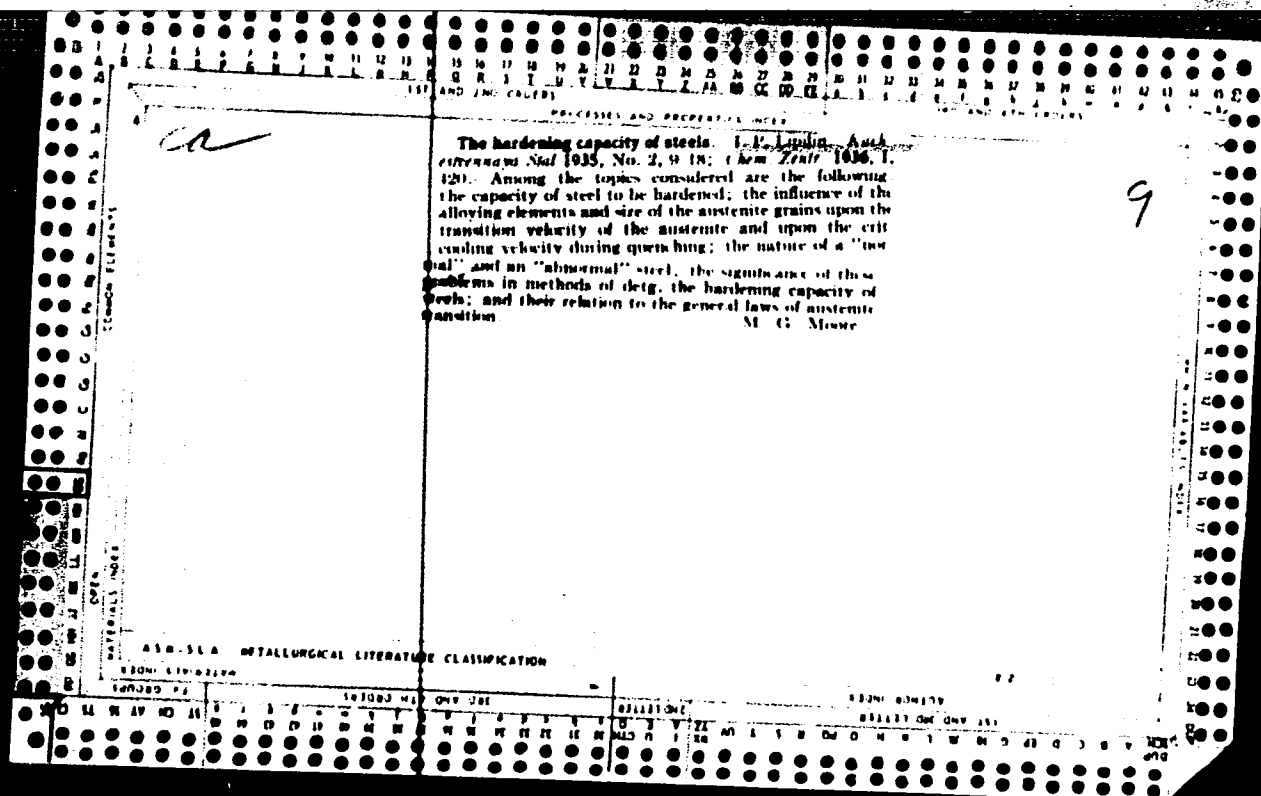
NO REF SOV: 000

OTHER: 000

MLL
Card 2/2

LEPILIN, A.Ya., inzh.

Build lightning-proof electric transmission lines. Mekh. i elek.
sots.sel'khoz. no.5:40 '56. (MIRA 12:4)
(Electric lines) (Lightning protection)



COMMON ELEMENTS		COMMON VARIABLES MORE	
<p>Isothermal Annealing of Hot Ingots and Forgings. I. P. Lipilin. (Katshestvennaia Stal, 1936, vol. 10, pp. 12-22). Isothermal annealing is compared with the ordinary slow-cooling process for six steels: (1-3) Tool steels (chromium-tungsten-vanadium, chromium-tungsten-manganese), (4) Ball-bearing steel (chromium) and (5) and (6) two structural steels (chromium-nickel and chromium-tungsten-nickel). Five series of experiments were made: (a) Slow cooling in the furnace of small discs cut from rolled bars, (b) isothermal annealing of the same discs in a lead bath, (c) isothermal annealing of samples cut from ingots and large forgings, (d) isothermal annealing of whole hot ingots and (e) isothermal annealing of whole hot forgings. (a) Steels (1) to (4) are softened already at 750-850° C.; it is therefore an unnecessary loss of time to continue slow cooling below these points. Steels (5) and (6) are softened first below 400° C.; they are better softened by isothermal hardening and high-temperature annealing. (b) The velocity of softening has a maximum about 100° below the critical point. Steels (1) to (4) can be softened isothermally in 15 to 30 min., (5) requires about 1 hr., and (6) cannot be softened by this method at all. Best results are obtained with steels (1) to (4) at temperatures somewhat above that of the maximum velocity. (c) With steels (1) and (2), the transformation of austenite goes more slowly in forgings than in rolled bars, and still more slowly in castings; hot mechanical treatment facilitates the breakdown by crushing the carbides and producing dissociation centres. With hyper-</p>			
<p>ASH-STA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>STEEL STEELING</p>		<p>STEELING</p>	
<p>STEELING</p>		<p>STEELING</p>	

eutectoid steels (3) and (4) differences in the dissociation velocity of ingots, forgings and rolled bars are much smaller, and with the eutectoid steel (5) ingots and forgings are transformed more quickly than bars. (d) Ingots made of steels (1) to (4) were successfully annealed by placing them when at a temperature of 1000-800° C.

in a furnace heated to 500-600°C., and heating first to a temperature of A_{c1} - 100°, and then to A_{c1} - 50°. Steel (5) was first homogenised at 1150°, isothermally hardened at 300° and annealed at 650°. A great economy in time is obtained by the isothermal annealing of steels (1) to (4). With structural steel (5), isothermal annealing prevents the occurrence of defects which may arise owing to the martensite transformation. (e) Equally good results were obtained by the isothermal annealing of forgings of all the six steels investigated. (In Russian).

1ST AND 2ND DEGREE										3RD AND 4TH DEGREE									
PROCESSES AND PROPERTIES INDEX																			
<p>Heat Treatment of Uncooled Steel and Recrystallization of Cooled Steel at the Zaporozhstal Works. I. P. Lipilin. (Kachestvennaya Stal, 1937, No. 10, pp. 6-22). (In Russian). Previous work had shown that alloy-steel ingots could be annealed immediately after teeming if an isothermal annealing treatment was used. For this purpose the hot ingot was allowed to cool to a temperature some 50-100° C. below the A_c point, and held at that temperature for a time sufficient for the transformation of the austenite formed by cooling from the molten state into a mixture of ferrite and cementite to take place. In the present investigation more detailed data were obtained concerning the similar treatment of a number of alloy tool steels, and the work was subsequently extended to the study of the possibility of applying such treatment to forgings. In the first part of the paper experiments to determine the most suitable conditions under which this treatment should be applied to high-alloy tool steels, ball-bearing steels, chromium-tungsten, chromium-tungsten-manganese and other tool steels, chromium-nickel steels, low-alloy structural steels, carbon-tool steels and non-heat-treatable steels are described. In the second part, the annealing of steels which have been allowed to cool down to room temperature is discussed, and in conclusion a brief comparison is made between the annealing of uncooled steel and the ordinary annealing treatment.</p>																			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION																			
REGION SYMBOL										REGION SYMBOL									
SYMBOL										SYMBOL									

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19

The Transformation of Supercooled Austenite in Chromium-Nickel Steel (K10) and the Effect upon It of the Original Structure and of the Initial Heating Temperature. I. P. Lipilin and T. A. Dudovtsov. (Kachestvennaya Stal, 1937, No. 11, pp. 14-19). (In Russian). The steel used contained 0.32% of carbon, 0.40% of silicon, 0.40% of manganese, 0.02% of sulphur, 0.016% of phosphorus, 1.48% of chromium and 3.25% of nickel. The investigation of the transformation of the austenite in this steel was studied using both wrought and cast specimens. For high temperature transformation the specimens were quenched after tempering and their hardness and micro-structure were determined, and the rate of transformation at temperatures from 150° to 500° C. was studied directly by hardness measurements at the tempering temperature. The authors describe the best heat treatment for this steel.

MATERIALS INDEX		PROCESSING AND PROPERTIES INDEX	
COMMON ELEMENTS	COMMON VARIABLES INDEX	COMMON ELEMENTS	COMMON VARIABLES INDEX
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

The Influence of Some Factors on the Transformation of the Austenite in High-Speed Steel R and Steel ZKAVS. I. P. Iapilii and A. Usov. (Kachestvennaya Stal, 1938, No. 2, pp. 14-18). (In Russian). Steel R contained carbon 0.70%, chromium 4.34%, tungsten 18.5% and vanadium 0.50%, whilst the composition of steel ZKAVS was carbon 0.35%, chromium 2.55%, tungsten 7.70% and vanadium 0.37%. Both steels were studied in the as-cast, rough-forged and fine-rolled conditions. The progress of the austenite transformation was studied by Rockwell-C hardness measurements (given in graphical form) and, in a number of cases, by microscopic examination. The effects of the original structure, the temperature of the first heat treatment, the rate of cooling from this temperature to the isothermal-transformation temperature and of plastic deformation at temperatures above the A_c1 point on the decomposition of the supercooled austenite were studied. It was found that the supercooled austenite decomposed more rapidly in the forged and the rolled than in the as-cast specimens, owing to the greater number of carbide fragments present. Raising the temperature to which the steel was originally heated considerably increased the stability of the supercooled austenite owing to dissolution of the carbides and also because of the growth of the austenite grains. Precipitation of carbides during slow cooling from the above temperature lowered the stability of the austenite. Plastic deformation also lowered the stability owing to the breaking-up of the austenite grains and the precipitation of carbide particles which took place during the deformation.

ASW-514 METALLURGICAL LITERATURE COMPANION

LIPILIN, I.

Bainite transformation of austenite (From: "Metals Technology"
June 1944). Stal' 7 no.2:181-184 '47. (MLRA 9:1)
(Austenite)

SOV/137-58-10-21616

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 166 (USSR)

AUTHORS: Taran, V.D., Lipilin, I.P.

TITLE: Investigation and Selection of Novel Types of Steel for Drilling Bits (Issledovaniye i vybor novykh staley dlya burovnykh dolot)

PERIODICAL: Materialy Mezhvuz. nauchn. soveshchaniya po vopr. novoy tekhn. v neft. prom-sti, 1958, Vol 3, pp 97-110

ABSTRACT: Research was performed on novel types of high-strength steel containing no expensive or scarce alloying elements. Two groups of steel were tested: 1) Steels containing 0.15-0.35% C (18KhGT, 20Kh, 20KhNZ, 30KhGS); 2) steels containing 0.28-0.55% C (30KhGS, 40KhN, 50KhGS). Investigations were carried out on specimens the size and shape of which corresponded to the cutting teeth in the central jaws (rollers) of a ZK-12 drilling bit. The specimens were subjected to impact tests as well as tests on impact wear. Best results were achieved with steels 20KhNZ and 30KhGS. Since steel 30KhGS does not contain any scarce elements, it was adopted for manufacture of drilling bits. After quenching and tempering operations at temperatures of 880°C and 250°C, respectively, the steel

Card 1/2

SOV/137-58-10-21616

Investigation and Selection of Novel Types of Steel for Drilling Bits

30KhGS possesses a σ_b of 185 kg/mm², a σ_s of 179 kg/mm², and an a_k of 8.3 kgm/cm². The structure of a carburized layer of steel 30KhGS is normal, i.e., it does not contain any carbide network and is free of large carbide inclusions. Laboratory and shop tests revealed the advantages of steel 30KhGS over the steels 18KhGT and 12KhN2. The authors emphasize the need for further research on methods of heat treatment of jaws made of 30KhGS steel.

I.B.

1. Drills--Materials
2. Steel---Applications
3. Steel---Properties
4. Drilling machines---Equipment

Card 2/2

LIPPLIN N.G.

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957, 112-2-4174
Nr 2, p.234 (USSR)

AUTHORS: Todorov, G.A., Liplin, N.G.

TITLE: Improving the Process for Manufacturing Subminiature
Tube (Usovershenstvovaniye protsessa izgotovleniya
kolb pal'chikovykh lamp)

PERIODICAL: Sb. rats. predlozh. M-vo radiotekhn. prom-sti SSSR,
1955, Nr 1, p.23

ABSTRACT: Bibliographic entry.

Card 1/1

LIPILIN, S.Z.

Improving mine operations. Ugol' Ukr. 4 no.8:11-12 Ag '60.
(MIRA 13:9)

1. Upravlyayushchiy trestom Sverdlovugol'.
(Donet Basin--Coal mines and mining)

LIPILIN, S.Z.

Work of E. Dubinskii's brigade of communist labor. Ugol' 35 no.8:22-
23 Ag '60. (MIRA 13:9)

1. Upravlyayushchiy trestom Sverdlovugol' Iuganskogo sovnarkhoza.
(Donets Basin--Coal mines and mining--Labor productivity)

MOSKVICHEV, Ye.I.; KAPIT, B.F.; LIPILIN, V.A.

Using the method of least squares to process telluorgrams.
Geofiz. razved. no.9:74-80 '62. (MIRA 15:9)
(Electric prospecting)

LAPILINA, I. L.

2

Inst Gen. + Inorg. Chem., AS USSR

Volume of the gas-liquid interface. A. P. Kapustin. *ibid.* and I. I. Lapilina. *Doklady Akad. Nauk S.S.S.R.* 245-2 (1968).—Densities of aq. solns. of UO_2Cl_2 and $UO_2(NO_3)_2$ prep'd. from sulfate carefully recrystd. several times, were det'd. at 25 ($\pm 0.005^\circ$) by a pycnometric method, with cathetometric readings of the liquid level in the capillary within ± 0.02 mm., over-all accuracy 0.01%. Selected data: UO_2Cl_2 , molality m 0.2129, 0.0800, 0.0608, 0.0228, 0.0080, d_4^{25} 1.0891, 1.0841, 1.0132, 1.0048, 0.9986; $UO_2(NO_3)_2$, m 0.8288, 0.2010, 0.1227, 0.0910, 0.0841, 0.0107, d_4^{25} 1.1108, 1.0828, 1.0408, 1.0373, 1.0187, 1.0017. The apparent molal vols. v_ϕ follow Mason's semi-empirical linear relation with \sqrt{m} only at higher m ; extrapolation to $m = 0$ gives, for UO_2Cl_2 , $v_\phi = 30$, for $UO_2(NO_3)_2$, $v_\phi = 88$ cc. With the aid of the data of Fajans and Johnson (C.A. 36, 2778) for the anions, this gives, for UO_2^{++} , $v_\phi = -4.5$ and -6.0 , av. -5.3 cc. At lower \sqrt{m} , the curves of v_ϕ deviate considerably from linearity in the sense of rapid fall of v_ϕ with falling \sqrt{m} . Plots of the derivative of the d , with respect to m , as a function of m , show discontinuities at points corresponding to $UO_2(NO_3)_2 \cdot 400 H_2O$, $UO_2Cl_2 \cdot 200 H_2O$ and $UO_2Cl_2 \cdot 900 H_2O$. Such formulas cannot be interpreted as hydrates. More likely, the hydrated ion is $(UO_2 \cdot 2H_2O)^{++}$, with the coordination no. 4 around the U atom. This tetrahedral ion can easily have an orienting effect on a few hundred surrounding H_2O molecules, which may explain the observed discontinuities. N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

62-2778

62-2778

LIPILINA, I. I.

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 26/44

Authors : Lipilina, I. I., and Samoylov, O. Ya.

Title : Thermochemical study of the structure of diluted aqueous uranyl chloride and uranyl nitrate solutions

Periodical : Dok. AN SSSR 98/1, 99-102, Sep 1, 1954

Abstract : The integral heats of solution of $UO_2Cl_2 \cdot 3H_2O$ and $UO_2(NO_3)_2 \cdot 6H_2O$, were measured in H_2O and in aqueous acid solutions by the thermochemical method ordinarily used for the determination of coordination numbers of ions in aqueous solutions. The relation between the heats of solution of the salts and the acid concentration in the solvent was established. It was also established that the structure of diluted solutions corresponds to the least possible change in the structure of H_2O , i.e., during formation of diluted solutions the structure of H_2O remains basically unchanged. Fourteen references: 7-USSR; 4-USA and 3-German (1909-1953). Table; graph; drawing.

Institution : Acad. of Sc. USSR, The N. S. Kurnakov Institute of General and Inorganic Chemistry

Presented by : Academician I. I. Chernyaev, April 10, 1954

LIPILINA I. I.

USSR/Chemistry - Inorganic chemistry

Card 1/1 Pub. 22 - 28/62

Authors : Lipilina, I. I.

Title : Coordination number and disposition of NO_3^- ion in the structure of a diluted water solution

Periodical : Dok. AN SSSR 102/3, 525-528, May 21, 1955

Abstract : Employing a thermochemical method which was previously applied in the determination of coordination numbers for various monoatomic ions and the triatomic UO_2^{++} ion the author established the coordination number for the tetraatomic NO_3^- ion and explains the structure of diluted aqueous solutions containing this particular ion. The formula which makes it possible to find the coordination number of the NO_3^- ion is given. The characteristic structural features of the diluted water solution, as observed during the experiments, are described. Fifteen references: 10 USSR, 1 Norwegian, 1 German, 2 USA and 1 Finnish (1932-1943). Drawings.

Institution : Acad. of Sc., USSR, The N. S. Kurnakov Inst. of Gen. and Inorgan. Chem.

Presented by: Academician I. I. Chernyayev, November 27, 1954

LIPILINA, I. I.

LIPILINA, I. I.- "Investigations of the Density, Heat Capacity, Solution Heat, and Structure of Aqueous Solutions of Chloride and Nitrate of Uranyl." Inst of General and Inorganic Chemistry imeni N. S. Kurnakov of the Acad Sci USSR, Moscow, 1955
(Dissertations for Degree of Candidate of Chemical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

KAPUSTINSKIY, A.F.; LIPILINA, I.I.

Heat capacity of uranyl chloride and nitrate aqueous solutions and
apparent molal heat capacity of the uranyl ion. Dokl. AN SSSR 104
no. 2:264-267 S '55. (MLRA 9:2)

1. Chlen-korrespondent AN SSSR (for Kapustinskiy). 2. Institut
obshchey i neorganicheskoy khimii imeni N.S. Kurnakova Akademii
nauk SSSR.

(Uranyl salts) (Specific heat)

LIPILINA, I. I.

Category: USSR / Physical Chemistry
Thermodynamics. Thermochemistry. Equilibrium. Physico-
chemical analysis. Phase transitions.

B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29948

Author : Kapustinskiy A. F., Lipilina I. I.

Inst : Academy of Sciences USSR

Title : Density of Aqueous Solutions and Apparent Molar Volumes of Uranyl
Nitrate

Orig Pub: Izv. AN SSSR, Otd. khim. n., 1956, No 6, 649-657

Abstract: Investigation, at 25°, of density of aqueous solutions of uranyl
nitrate (I) in the concentration range from 0.7 to 52.4% by weight.
Determinations were made by means of a quartz pycnometer with a
capillary neck; the determination procedure is described. Accu-
racy of the measurements is evaluated at 0.001%, summative accu-
racy of determination of density of I was of 0.01%. From experi-
mental data was calculated the apparent molar volume (AMV) of I

Card : 1/2

-67-

Category: USSR / Physical Chemistry
Thermodynamics. Thermochemistry. Equilibrium. Physico-
chemical analysis. Phase transitions.

B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29948

in infinitely dilute aqueous solution $\phi_V^0 = 65.9$ ml/mole. An
equation is given which correlates $\phi_V \frac{I}{m}$ with molar concentration:
 $\phi_V = 65.9 + 5.23 \sqrt{m}$. MAV of UO_2^{2+} ion in infinitely dilute
solution was calculated and found to be 7.1 ml/g-ion.

Card : 2/2

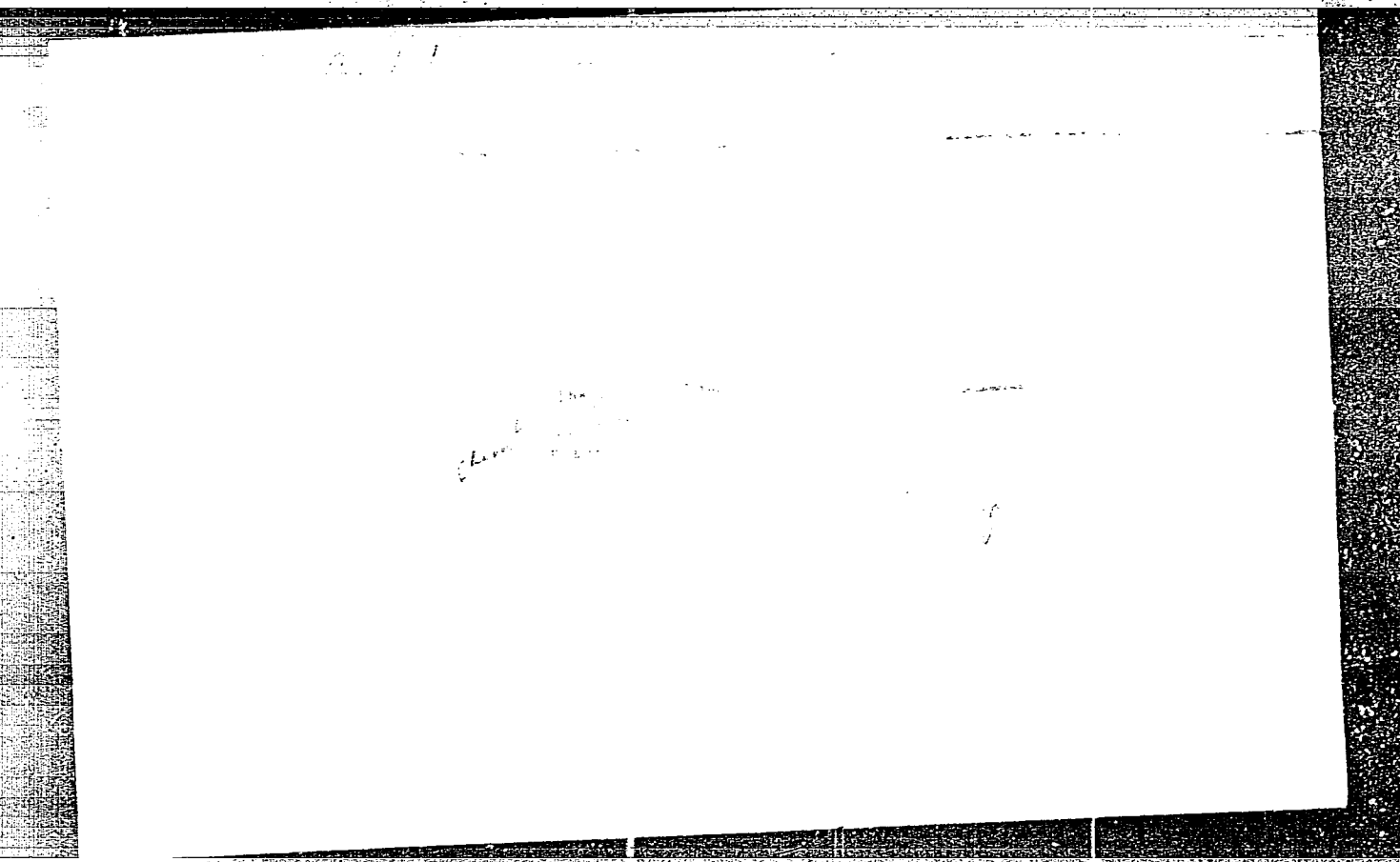
-68-

BERNAL, J.D.; LIPILINA, I.I., [translator]

Role of water in crystals. J.D.Bernal [Translated from the French by
I.I.Lipilina].Usp.khim.25 no.5:643-661 My '56. (MIRA 9:9)
(Crystals)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930020010-6



APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930020010-6"

KAPUSTINSKIY, A.F.; LIPILINA, I.I.; SAMOYLOV, O.Ya.

Gold calorimeter with sensitivity of 0.00005° for studying the thermochemistry of solutions. Investigation of the heat capacity of cesium iodide solutions with a tolerance of 0.03% (with English summary in insert). Zhur.fiz.khim. 30 no.4:896-900 (MLRA 9:9) Apr. '56.

1. Akademiya nauk SSSR, Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova, Moskva.
(Calorimeters) (Solution (Chemistry))

Lipilina I.I.

AUTHOR: Lipilina, I. I.

SCV/20-122-2-20/42

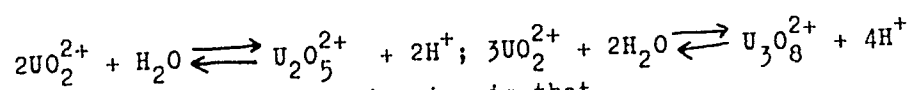
TITLE: The Constitution of Polynuclear Double-Charge Uranium Oxygen Complexes and Their Arrangement in the Aqueous Solution Structure (Stroyeniye mnogoyadernykh dvukhzaryadnykh uran-kislorodnykh kompleksov i ikh razmeshcheniye v strukture vodnogo rastvora)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 2, pp 238 - 241 (USSR)

ABSTRACT: Uranyl UO_2^{2+} has the coordination number 6 in diluted aqueous solutions which represent 2-1-electrolytes, and is placed in the "channels" of the water structure along the axis of the channel (Ref 1). The hydrolysis leads to the formation of polynuclear complexes in the solution (Refs 2-7); evidences bearing on the existence of ions $U_2O_5^{2+}$ and $U_3O_8^{2+}$ are the most probable. In the case that 2 (or 3) uranyl ions, each of them surrounded by 6 water molecules, are placed in 2 (or 3) adjoining channels of one layer of the water structure, the hydrolytic reactions

Card 1/4

The Constitution of polynuclear Double-Charge Uranium Oxygen SOV/20-122-2-20/42
Complexes and Their Arrangement in the Aqueous Solution Structure



can proceed. The author's view is that

$\text{U}_2\text{O}_5^{2+}$ and $\text{U}_3\text{O}_8^{2+}$ possess in the solution a structure as seen from figure 1b and 2b. The 6 water molecules cannot any more be placed around the uranyl which has entered into the complex ion. Each uranyl, however, will be surrounded by water molecules in the equatorial plane, and that according to a type which most closely approaches the arrangement around the 1 uranyl ion in the solution. There will be 8 water molecules around

$\text{U}_2\text{O}_5^{2+}$ in the equatorial plane, but 12 around $\text{U}_3\text{O}_8^{2+}$ (Figs 1b and 2b, which are drawn true to scale). The coordination number of the peripheral uranyls falls to 5 in the polynuclear complexes, for the central atom it is 6 (4 water molecules in the equatorial plane and 2 oxygen atoms).

Card 2/4

The number of water molecules around the complex which

The Constitution of Polynuclear Double-Charge Uranium Oxygen
Complexes and Their Arrangement in the Aqueous Solution Structure

contains n uran atoms is 4 n. The general formula for the composition of two-row positive uranium-oxygen-complexes which have been built up in the adjoining water channels according to the principle of a linear uranyl chain, and which are connected by oxygen atoms, is $[U_nO_{3n-1}]^{2+}(1)$.

It is possible to give it a shape from which it can be seen that the complexes are built up from uranylene:

$[nUO_2^{2+} \cdot (n-1)O^{2-}]^{2+}(2)$. Here, n means the number of

the uranium atoms or of the uranyl ions. The conception of the author concerning the linear structure of $U_2O_5^{2+}$ and

of $U_3O_8^{2+}$ with a coordination $UO_2-2O, 4H_2O$ for the uranyls

in the center of the chain and a coordination $UO_2-O, 4H_2O$

for the uranyls on the ends of the chain does not agree with the conception of reference 6. With an increasing pH

of the uranyl-salt-solutions no positive, but negative uranium oxygen complexes are formed. The author discusses the experimentally verified compounds: Sodium uranate,

Card 3/4

The Constitution of Polynuclear Double-Charge Uranium Oxygen Complexes and Their Arrangement in the Aqueous Solution Structure 207/26-127-2-26/42

-diuranate, calcium tetrauranate, sodium hepta- and octa-uranates (Refs 7,11,12). The polynuclear uranium-oxygen-anions ought to be considered as uranyl-oxygen-complexes. The hexavalent uranium is able to form different uranium oxygen configurations with an uranyl-bond in directions vertical to each other. Linear configurations arise if the uranyl-bond exists in one direction only. The above mentioned polynuclear complexes provide examples of complicated configuration if the uranyl bond is present in two directions vertical to each other. There are 3 figures and 16 references, 1 of which is Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im.N.S.Kurnakova
Akademii nauk SSSR (Institute of General and Inorganic
Chemistry imeni N.S.Kurnakov, AS USSR)

PRESENTED: May 6, 1958, by I.I.Chernyayev, Member, Academy of Sciences, USSR

SUBMITTED: April 19, 1958
Card 4/4

5(2)

PHASE I BOOK EXPLOITATION SOV/3401

Lipilina, Irina Ivanovna

Uranil i yego soyedineniya (Uranyl and Its Compounds) Moscow,
Izd-vo AN SSSR, 1959. 314 p. 3,000 copies printed.

Resp. Ed.: A.F. Kapustinskiy, Corresponding Member, USSR Academy
of Sciences; Ed. of Publishing House: D.N. Trifonov; Tech.
Ed.: I.F. Kuz'min.

Sponsoring Agency: Akademiya nauk SSSR. Institut obshchey i
neorganicheskoy khimii im. N.S. Kurnakova.

PURPOSE: This book is intended for chemists specializing in general
and inorganic chemistry.

COVERAGE: This is an extensive study of uranyl and uranium compounds
of predominantly uranyl content. It points out that the properties
of uranium compounds are closely associated with those of uranyl
and that aqueous solutions of uranyl salts have yielded much

Card 1/8

Uranyl and Its Compounds

SOV/3401

valuable data on uranyl, uranyl oxides, and uranyl anions. It also points out that the tendency of uranyl to form difficultly soluble compounds, and its susceptibility to extraction by organic solvents and to ion exchange makes it valuable for the extraction of uranium from ores and for the chemical purification of irradiated nuclear fuels. The author began this study in 1946, at the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov, Academy of Sciences, USSR. He thanks I.I. Chernyayev, Academician, A.P. Kapustinskiy and G.V. Bokiy, Corresponding Members of the Academy of Sciences, USSR, and M.A. Klochko, O.Ya. Samoylov, I.N. Lepeshkov, and V.A. Golovna, Doctors of Chemical Sciences. There are 591 references: 200 Soviet, the remainder English, German, French, Norwegian, Italian, Swedish and Yugoslavian.

TABLE OF CONTENTS:

Foreword by the Author	3
Ch. I. Uranyl and Its Properties	5
1. Brief outline of the development of the chemistry of uranium.	
Position of uranium in the periodic system of D.I.Mendeleyev	
Card 2/8—	

BERNAL, Dzh.D. [Bernal, J.D.]; LIPILINA, I.I. [translator]

Geometrical approach to the structure of liquids. Usp.khim. 30
no.10;1312-1323 0 '61. (MIRA 14:9)
(Liquids)

VORONKOVICH, I.V.; AFANAS'YEVA, Z.P.; BUTSEVICH, L.A.; LIPILINA, N.I.

Effect of fertilizer on soil population of actinomycetes antagonistic to phytopathogenic bacteria [with summary in English].
Mikrobiologiya 27 no.6:720-723 N-D '58. (MIRA 12:1)

1. Moskovskaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta zashchity rasteniy.

(ACTINOMYCES,

in soil, eff. of fertilizers on strains antag. to phytopathogens (Rus))

(FERTILIZERS, effects,

on Actinomyces antagonistic to phytopathogens in soil (Rus))

(SOIL, microbiology.

Actinomyces, eff. of fertilizers on strains antagonistic to phytopathogens (Rus))

LIPILKIN, A. N.

Doc Tech Sci

Dissertation: "Investigation of the Hydrodynamics of Heat Exchange in
Molecular Solutions." 30/6/50

Moscow Technological Inst of Food Industry

SO Vecheryaya Moskva
Sum 71

LIPILKINA, I. N.:

LIPILKINA, I. N.: "The effect of beer alcohol, onions, horseradish, and cabbage juice on the motor-evacuatory function of the gastrointestinal tract (roentgenological investigation)." First Leningrad Medical Inst local Academician I. P. Pavlov. Leningrad, 1956. (Dissertation for the degree of Candidate in Medical Sciences)

SO: Knizhnaya Letopis', N° 36, 1956, Moscow.

L 08213-67 EWT(m)/EWP(t)/ETI IJP(c) JD/WB

ACC NR: AP6014504

(A, N)

SOURCE CODE: UR/0317/66/000/004/0063/0066

AUTHOR: Lipin, A. (Candidate of chemical sciences; Engineer; Lieutenant colonel);
Golovkina, N. (Engineer); Matveyeva, N. (Engineer)

38

ORG: None

B

TITLE: Use and application of corrosion protection

SOURCE: Tekhnika i vooruzheniye, no. 4, 1966, 63-66

TOPIC TAGS: corrosion protection, electrolyte, electrolytic deposition, steel, ~~ferrous~~
~~metals~~, ~~metals~~ METAL COATINGS, ZINC, CADMIUM

ABSTRACT: Various considerations on corrosion and preservation of metals are presented on the basis of experimental research and practical applications. The mechanism of electrochemical reactions in zinc and cadmium coatings, in phosphate and other oxide films is explained and illustrated. It is mentioned that the corrosion of cadmium coated surfaces can be 0.5 mm deep. The destruction of zinc films proceeds with a speed of 0.4 to 4 microns per year. In general, the electrolytic processes are more effective. A cadmium-zinc electrolyte containing in one liter 14 g of zinc sulphate, 12 g of cadmium sulphate, 55 g of caustic potash and 55 g of Trilon A is considered the most effective. The effect of the current density and of the concentration of zinc salts on the cathode coatings is evaluated and graphically illustrated. The cadmium-zinc electrolyte has the same throwing power as the potassium cyanide electrolyte. The favorable effect of Trilon A on the increase of the cathode current density is stressed. The stability of cadmium-zinc electrolyte is high. The physical properties of cadmium-zinc are characterized by a microhardness of about 40 kg/sq mm and by the disappearance of porosity in layers of 3 microns and

Card 1/2

L 08213-67

ACC NR: AP6014504

and thicker. A pyrophosphate electrolyte (9 gr of stannic sulfate, 8 gr of zinc sulphate, 190 g of sodium pyrophosphate, 1 g of citric acid and 1 g of ammonium nitrate per one liter) is considered the most stable for obtaining a tin-zinc coating. Better results were obtained with electrolytes where sulphates were replaced by stannic chlorides. The Trilon pyrophosphate electrolyte is considered the best for obtaining tin-cadmium coatings. One liter of this electrolyte contains 12 to 45 g cadmium sulphate, 15 g of stannic chloride, 60 g of sodium pyrophosphate, 25 to 85 g of Trilon A, 10 g of phenol and 5 to 8 ml of triethanolamine. Its high throw power and increase of current density are stressed. Corrosion-resistant properties of various coatings were tested and compared. The best results were obtained with cadmium-zinc coatings containing 18 to 20% of zinc. In general, mechanical strength of metals were little affected by coatings. Some examples for certain types of steel are cited. The most effective phosphate processes are summarized in a table indicating electrolyte solutions, processing temperatures and duration. In general, combined phosphate and cadmium films resist better against corrosion than ordinary phosphate coatings (as shown in a comparative diagram). Orig. art. has: 3 diagrams and 1 table.

SUB CODE: 07, 13/ SUBM DATE: None

Card 2/2 *egh*

LIPIN, A.B.

Methods of studying the kinetics of reduction processes in
a fluidized bed. Izv. vys. ucheb. zav.; tsvet. met. 4 no.6:85-
92. '61. (MIRA 14:12)

1. Leningradskiy gornyy institut, kafedra metallurgii tyazhelykh
tsvetnykh i blagorodnykh metallov.
(Fluidization)
(Nonferrous metals--Metallurgy)

LIPIN, A.D.

KHALAIMOVA, N.I., ekonomist-planovik kolkhoza; LIPIN, A.D.

Taking quantity and quality into account. Nauka i pered. op. v
sel'khoz. 7 no.5:11-14 My '57. (MIRA 10:6)

1. Starshiy nauchnyy sotrudnik khlopkovoy zonal'noy opytnoy stantsii
(TANIIZ).

(Wages)

(Collective farms)

LIPIN, A. I.

BUKIN, G.I., inzh.; KLAPCHUK, L.D., inzh.; LIPIN, A.I., inzh.

Automatic control of the waterside pumping station of a state
regional electric power station. Elek.sta. 29 no.1:82-85 Ja '58.
(MIRA 11:2)

(Automatic control) (Pumping stations)

MIKHAYLOV, A.A., kand.tekhn.nauk; LIPIN, A.I., kand.khim.nauk

Investigating the performance of corroded units of hydraulic
and pneumatic systems. Vest.mashinostr. 42 no.7:38-41 J1
'62. (MIRA 15:8)

(Oil-hydraulic machinery—Corrosion)

(Pneumatic machinery—Corrosion)

LIPIN, A.I., Cand Chem Sci -- (diss) "Study of the process
of ^{the settling} ~~deposition~~ of electrolytic coatings upon aluminum alloys. //

[Mos], 1957. 11 pp (Acad Sci USSR, Inst of Physical Chemistry).

(KL, 1-58, 115)

- 13-

"APPROVED FOR RELEASE: 07/12/2001

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APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930020010-6"

137-58-6-13055

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 268 (USSR)

AUTHORS: Shluger, M.A., Lipin, A.I.

TITLE: Attachments for Depositing Heavy Chrome Coatings on Parts
(Prisposobleniya dlya osazhdeniya na detalyakh tolstykh khrom-
ovykh pokrytiy)

PERIODICAL: V sb.: Teoriya i praktika elektrolit. khromirovaniya. Mos-
cow, AN SSSR, 1957, pp 215-223

ABSTRACT: Presentation of experiences in the application of some sus-
pended attachments for the production of a uniform deposition
of heavy coats of Cr 0.1-0.2 mm thick. Such chrome plating is
achieved by horizontal positioning of an article in the cell and a
periodic 90° rotation of it every 35-40 min with the help of the
attachments developed. Flat anodes are placed at a distance of
100-200 mm from the surface to be chrome-plated. A method
for the selection of an optimum configuration of the anode for
dimensionally controlled chrome plating is included.

1. Chromium--Electrodeposition 2. Chromium plating P.S.
--Equipment

Card 1/1

19 21 27
Electrodeposition of lead indium alloys M. A. Shluger

5(4)

SOV/62-59-9-6/40

AUTHOR:

Lipin, A. I.

TITLE:

Determination of the Cohesion of Metallic Coatings on Alien Lining by the Electrochemical Means

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1546-1552 (USSR)

ABSTRACT:

An electrochemical determination of the cohesion of the electrolytic precipitate on the basic metal can be developed from the dependence of the polarization of the electrode from the true current density considering the increase of the active cathode surface. The active participation of the cathode surface is determined by means of polarization at the moment of the switching-on of current (Vagramyan, Tsareva, reference 2). In the present paper the cohesiveness of an electrolytic zinc precipitate on the aluminum alloy AK-4 was investigated. The determination of the polarization at the moment of switching-on the current and the subsequent process of electrolysis is carried out with a device which is schematically represented on figure 1. The jump in potential of the electrode in switching-on the current was recorded with an oscillograph. The steady value

Card 1/3

SOV/62-59-9-6/40

Determination of the Cohesion of Metallic Coatings on Alien Lining by the Electrochemical Means

of the potential was determined with a potentiometer of the PPTV-1-type, that of the variation of the potential during electrolysis with a cathode voltmeter. Zinc was precipitated on the aluminum alloy AK-4 from the following solution: fluoboric acid zinc 200 g/l and fluoboric acid ammonium 30 g/l + licorice root 0.5 g/l at 20° and at an amperage of 5 a/dm² with respect to the geometrical surface of the electrode. The shape of the jump in potential at switching on of the current depends on the preliminary treatment of the metal surface and the latter, at the switching off and on, depends on the duration of the current-free state between the switchings (Figs 2,3,4). The longer the time between the switchings the lower is the jump potential, i.e. during the switching-on times zinc precipitates on the oxide-layer coated aluminum alloy. During the current-free time the oxide film solves and the zinc-coating is in direct contact with the aluminum. In the further process zinc is precipitated on zinc in the electrolysis. In this case the jump in potential is not great. The cathode surface has become activated by the

Card 2/3

SOV/62-59-9-6/40

Determination of the Cohesion of Metallic Coatings on Alien Lining by the
Electrochemical Means

preliminary treatment. The jumps in potential show a similar character after an anodic solving of the zinc. The active surface of the electrode was calculated after such a treatment and the author lists the optimum conditions for the preparation of solidly adhering zinc coatings on the aluminum alloy AK-4. There are 7 figures and 5 references, 4 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of
Physical Chemistry of the Academy of Sciences, USSR)

SUBMITTED: December 6, 1957

Card 3/3

5.2200, 18.7400

78225
SOV/80-33-3-26/47

AUTHORS: Lipin, A. I., Livshits, M. M.

TITLE: The Effect of Organic Admixtures on the Rate of Nickel Reduction in Acid and Alkaline Solutions

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3, pp 658-662 (USSR)

ABSTRACT: Samples of type 20 steel were chemically nickel-plated in acid solutions (30 g/liter nickelous chloride and 10 g/liter calcium hyposulfite) and in alkaline solutions (20 g/liter nickelous chloride and 10 g/liter calcium hyposulfite) containing various organic additives, and the effect of the latter on the rate of nickel reduction was studied. The plating in acid solution was made at 90-92° C, initial pH = 5.5-6.0; in alkaline solution the conditions were 86-87° C, pH = 9.0-9.5. The rate of nickel reduction was determined by weighing the samples; potentiometer LP-5 was used in the measuring of pH. The effect of

Card 1/3

The Effect of Organic Admixtures on the
Rate of Nickel Reduction in Acid and
Alkaline Solutions

78225
SOV/80-33-3-26/47

the following additives was investigated: saturated monocarboxylic acids (formic, acetic, and isovaleric); saturated and unsaturated dicarboxylic acids (malonic, succinic, adipic, azelaic, maleic); hydroxy acids (malic, tartaric); and amino acids (aminoacetic, α -aminosuccinic). The addition of monocarboxylic acids (particularly acetic acid) to the acid plating solution gave a high rate of nickel reduction during the first hour of plating. In case of dicarboxylic acids, the rate of reduction decreased with increasing number of methylene groups in the acid molecule. The highest rate of nickel reduction was obtained with aminoacetic acid. The addition of malic acid gave a fair rate of reduction, and that of tartaric acid, a very low rate. The pH decreased during plating from 6 to 0.5, depending on the additive. In case of the two most effective acids, acetic and aminoacetic, pH decreased to 3.5-4 during the first two hours and

Card 2/3

The Effect of Organic Admixtures on the
Rate of Nickel Reduction in Acid and
Alkaline Solutions

78225
SOV/80-33-3-26/47

remained for a long time at this level: The above acids evidently acted as buffers. In alkaline plating solutions, the nature of the additive had no substantial effect on the rate of nickel reduction, with the exception of maleic acid which gave a very low rate of reduction. The pH decreased from 9.5-10 to 7-8 for all of the investigated acids; hence, their action in alkaline solutions cannot be explained by a buffering effect. There are 2 figures; 2 tables; and 3 references, 1 U.S., 2 Soviet. The U.S. reference is: C. Mehjers, A. Brenner, Plating, 44, 12, 1297-1305 (1957).

SUBMITTED: June 19, 1959

Card 3/3

S/193/61/000/003/006/009
A004/A101

AUTHOR: Lipin, A. I.

TITLE: Reconditioning of worn parts by chemical nickel-plating

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 3, 1961, 34 - 36

TEXT: The author comments on the deficiencies of electrolytic chrome-plating for parts with complex configuration and points out that the reconditioning of parts by chemical nickel-plating makes it possible to obtain deposits which are uniform in thickness over the whole component surface. The throwing power of the electrolyte which is of utmost importance in electrolytic chrome-plating does not affect the deposition of nickel-plating which is practically taking place at a uniform rate on all parts of the component being in contact with the solution. Variations in thickness of the deposited layer amount to 3 - 10%, which is due to the temperature fluctuations of the bath. If this temperature is maintained with an accuracy of $\pm 2^\circ$ the nonuniformity of the layer will not exceed 3 - 4 μ at a total thickness of the layer in the range of 35 - 40 μ . The high hardness acquired by chemically nickel-plated parts results mainly from the heat treatment the parts are subjected to after the plating process. Table 1 shows the hardness of

Card 1/4

S/193/61/000/003/006/009

Reconditioning of worn parts by chemical nickel-plating A004/A101

the nickel-plated coats produced in acid or alkali solutions depending on the temperature of heat-treatment for 1 h. Tests which are carried out to establish the resistance to wear of nickel-plated steel specimens in pairs with cast iron, at a sliding speed of the specimens of 0.47 m/sec, a specific pressure of 25 kg/cm² and lubrication with AK-10 automobile oil ("avtol") showed a rapid running-in ability of the mating pair which is characteristic for nickel platings. The least wear on cast iron was shown by nickel-phosphorus platings heat-treated at 350-450°C. Deposits from acid solutions were less subjected to wear than those from alkali solutions. A considerable increase in the adhesion of deposits to aluminum alloys is taking place at heat-treatment temperatures in the range of 200 - 220°C for 2 - 3 h. Table 2 shows the results of stand tests carried out with parts of complex configuration reconditioned by chemical nickel-plating. It follows from the table that during the test period the magnitude of wear did not exceed 0.005 mm and was commensurable with the wear of parts without plating. Service tests of automobile parts proved that the wear of reconditioned parts was by 20 - 30% lower in comparison with new ones. The tests carried out showed that a sufficient activation of the component surface is obtained by treatment in hydrochloric acid or in a solution composed of hydrochloric and hydrofluoric acid. A good adhesion of the plating on bronze and brass parts is obtained by pretreating them in nitric

Card 2/4

Reconditioning of worn parts by chemical ...

S/193/61/000/003/006/009
A004/A101

acid. There are 2 tables.

Table 1:

heat-treatment temperature, in degrees	hardness of platings produced from solutions, kg/mm ²	
	acid	alkali
without heat-treatment	450 - 500	450
100	450 - 500	450 - 500
200	450 - 520	500 - 630
300	660 - 700	650 - 750
400	900 - 920	710 - 750
500	800 - 850	600
600	620 - 630	450 - 500

Card 3/4

LIPIN, Aleksandr Ivanovich, inzh.; SHLUGER, Mikhail Aleksandrovich,
kand. tekhn. nauk; RYABOY, Ayzik Yakovlevich, inzh.; SHOVIK,
I.Ye., inzh., ved. red.; SOROKINA, T.M., tekhn. red.

[Reducing the loss of chromium anhydride in electrolytic
chromium plating. Chromium plating from a cold tetrachromate
electrolyte] Umen'shenie poter' khromovogo angidrida pri elek-
troliticheskom khromirovanii. Khromirovanie iz kholodnogo
tetrakhromatnogo elektrolita. [By] A.IA.Riaboi, M.A.Shluger.
Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958.
16 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi
opyt. Tema 13. No.M-58-203/21) (MIRA 16:3)
(Chromium plating) (Electrolytes)

LIPIN, A.I.; NOVIKOVA, N.I., inzh., red.

[Equipment for applying metallic and paint coatings]
Oborudovanie dlia naneseniia metallicheskikh i lako-
krasochnykh pokrytii. Moskva, 1963. 70 p. (Materialy
zavodskogo opyta, no.3) (MIRA 17:4)

1. Moscow. Gosudarstvennyy nauchno-issledovatel'skiy in-
stitut nauchnoy i tekhnicheskoy informatsii.

BELKIN, P.B.; LIPIN, A.I., kand.khim.nauk

Basic trends of the mechanization and automation of electroplating
processes. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. 1
tekh.inform. 17 no. 5:77-79 My '64. (MIRA17:6)

LIPIN, A.I.; BELKIN, B.P.

Automatic control and regulation of electrolysis conditions.
Biol.tekh.-ekon. inform. Gos. nauch.-issl.nauch. 1 tekhn.
inform. 17 no.9:93-96 S '64 (MIRA 18:1)

LIPIN, A.I.; MASHUTIN, Ye.V.

Chemical nickel plating in alkaline solutions. Zhur. prikl. khim.
37 no.6:1182-1194 Je '64. (MIRA 18:3)

L 41718-65 EWT(m)/EWP(t)/EWP(b) AFFTC/RADC JD

ACCESSION NR: AP5010974

UR/0286/65/000/007/0160/0160

AUTHORS: Lipin, A. I.; Golovkina, N. P.

TITLE: A method for improving anticorrosional properties of phosphated steel
details. Class 48, No. 169969

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 160

TOPIC TAGS: corrosion protection, steel, phosphated steel, cadmium inorganic
compound, potassium compound

ABSTRACT: This Author Certificate presents a method for improving anticorrosional
properties of phosphated steel details. To increase the stability of phosphate
film, the latter is coated by contact-precipitation with cadmium from a solution
containing (in g/liter): cadmium sulfate - 8-10; potassium cyanide - 1-3;
potassium hydroxide - 10-15. The process is conducted for 3-10 minutes at 20-30C.

ASSOCIATION: none

SUBMITTED: 18Apr64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 1/1 *me*

L 13020-50 E.T.(m)/E.N.P.(t)/E.N.P.(b) JD
ACC NR: AP6002582 (A)

SOURCE CODE: UR/0286/65/000/023/0076/0076

INVENTOR: Lipin, A. I.; Golovina, N. P.

ORG: none

TITLE: Method of plating steel parts with cadmium ^{6,44,55} Class 48, No. 176766 27
B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 76

TOPIC TAGS: metal plating, cadmium, steel

ABSTRACT: This Author Certificate introduces a method of plating steel parts with cadmium in a cyanic solution. To alleviate the plating in areas of low accessibility of complex-shaped parts and internal surfaces of tubes, the process is carried out in a solution containing 8—12 g/l cadmium sulfide, 1—3 g/l cadmium cyanide, and 10—15 g/l potassium hydroxide, with the steel part in contact with aluminum at a temperature of 20—70C. [ND]

SUB CODE: 13, 11/ SUBM DATE: 18Apr64/ ATD PRESS: 4/85

Card 1/1

UDC: 621.357.76:669.738

KAZAKOV, V.A.; LIPIN, A.I.; MARTYNOVA, L.S.

Chromium electrodeposition at high temperatures. Zhur., prikl. khim.
38 no.11:2595-2596 N '65. (MIRA 18:12)

1. Submitted November 10, 1963.

LIPIN, A.N.

Science

Fresh water and fresh-water life. Moskva, Uchpedgiz, 1950.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

LIPIN, A.N.

Water

Valuable scientific manual ("Fresh waters and their life." Review by V.A. Movchan).
Ryb. khoz. 28 no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, July, 1952. UNCLASSIFIED.

L 22708-66 EWT(d)/EWT(1)/ENP(m)/EWT(m)/ENP(w)/EWA(d)/T-2/ENP(k)/EWA(h)/ETC(m)-6/

ACC NR: AP6010855

SOURCE CODE: UR/0421/66/000/001/0142/0144

EWA(1) EM

AUTHOR: Ladyzhenskiy, M. D. (Deceased; Moscow); Lipin, A. V. (Moscow)

ORG: none

TITLE: Aerodynamic properties of rectangular plates in rarefied, hypersonic gas flow

74
B

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 1, 1966, 142-144

TOPIC TAGS: hypersonic aerodynamics, hypersonic flow, viscous flow, free molecular flow, wind tunnel test, lift coefficient, drag coefficient, thin wing

ABSTRACT: An experimental investigation of aerodynamic properties of rectangular plates at an angle of attack in viscous hypersonic air flows was carried out with the purpose of determining the optimal dimensions of wings. These experiments were conducted in a low density wind tunnel on various rectangular plates having the same surface s , of various aspect ratios $\lambda = 0.1-9$, of relative thicknesses $\delta = d/\sqrt{s} = 0.025-0.16$ at a free-flow Mach number $M = 5.15$ and temperature $T_0 = 293^\circ K$ and $Re = 2.3 \times 10^2$ under the assumption that the wing surface temperature is much lower than the air-flow stagnation temperature. The experiments included measurements of normal and tangential components of

Card 1/3

L 22708-66

ACC NR: AP6010855

aerodynamic forces at different angles of attack. Comparisons of experimental values of the drag $C_x(\alpha)$ and lift $C_y(\alpha)$ coefficients obtained here with theoretical data based on the theory of free-molecular flow for total diffusion reflection, show that the theoretical values of the lift coefficient agree better with experiment than those of the drag coefficient. It was also established that the drag coefficient at $\alpha = 0$ decreases with λ , which is explained both by a decrease in the bluntness effect and by an increase in the effective Reynolds number. The dependence of K_m , the maximum value of the L/D ratio, on the aspect ratio λ and relative thickness δ is given in Fig. 1 and Fig. 2. The

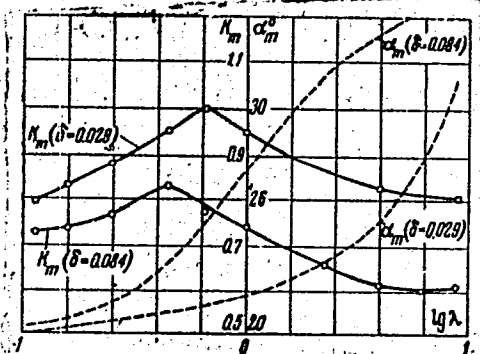


Fig. 1. K_m and α_m versus λ

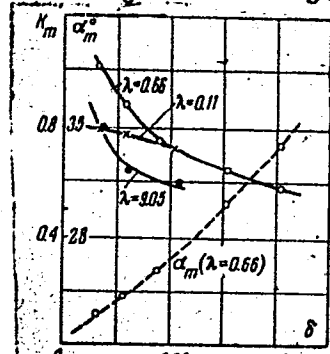


Fig. 2. K_m and α_m versus δ

Card 2/3

L 22708-66

ACC NR: AP6010855

values of α_m , the angle of attack at which the maximum K_m is attained, are plotted in Fig. 1. An analysis of the curves shows that the values of K_m for a rectangular plate of finite surface and thickness have a maximum at a certain value of λ and that in case of viscous, hypersonic flows, wings with small aspect ratios ($\lambda < 1$) are more advantageous than wings with larger aspect ratio ($\lambda > 1$), in contrast to what happens at large Reynolds numbers. Orig. art. has: 5 figures.

[AB]

SUB CODE: 20/ SUBM DATE: 25Jul65/ ORIG REF: 001/ OTH REF: 001/
ATD PRESS: 4229

Card

3/3

BK

1ST AND 2ND COVERS										3RD AND 4TH COVERS									
PROCESSES AND PROPERTIES INDEX																			
COMMON ELEMENTS										COMMON VARIABLE ELEMENTS									
<p>22</p> <p><i>M</i></p> <p>Metallurgical Departments of the Ural Nickel Works. B. V. Lipin and N. Ya. Zlokazov (<i>Zvezdye Metally</i> (<i>The Non-Ferrous Metals</i>), 1933, (6), 60-74; <i>C. Abs.</i>, 1934, 5009).—[In Russian.] A description of the nickel works at Verkhniy Ufa (Ural).—S. G.</p>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
FROM DIVISION										AUTHOR INDEX									
1ST AND 2ND COVERS										3RD AND 4TH COVERS									

T75

USSR/Metals
Metallurgical Plants
Statistical Methods

Jul/Aug 1964

"Statistics for Computing the Output of Factory Enterprises"
B. V. Lipin, Candidate in Technical Sciences, Saratov
Kibbel' Factory, 4 1/2 pp

"Svetoye Metally" No 4

The work index of a factory, especially a metallurgical factory, depends on many processes and operations. Thus, it is necessary to determine a standard for the counting of the various outputs to attain a single standard on which a factory's total output can be computed. The author presents curves and tables computed.

2005

USSR/Metals (Contd)

Jul/Aug 1964

samples. He also states that it is very possible not only to make minor errors, but even to be completely in error because of the presence of extraneous material in the calculations.

LIPIN, B. V.

LIPIN, B.V.

AUTHOR: Lipin, B. V.

136-9-6/14

TITLE: On the form of losses of non-ferrous metals in slag.
(O forme poteri' tsvetnykh metallov so shlamom).

PERIODICAL: Tsvetnyye Metally, 1957, No. 2, pp. 31-36 (USSR).

ABSTRACT: The aim of the investigation described was to provide information on the form and the mechanism of losses of metals such as copper, nickel, lead and cobalt in slag and to suggest ways of reducing these losses. The authors consider first the solubility of sulphides in slags and the presence of oxidized compounds of the metals, basing themselves on literature data and thermodynamics. The major part of the article is occupied by the authors' discussion of mechanical losses. They quote results of microscopic investigations of slags and show by Stokes-law calculations that their observed sizes of sulphide particles are sufficiently small to indicate that an appreciable proportion would remain in suspension. They describe a laboratory centrifuge apparatus (Fig. 1) with a crucible diameter of 60-100 mm and capacity of 300-800 g of slags. They used rates of revolution of 500-1000 per minute and temperatures of 1100-1350°C. The reductions in the concentrations of

Card 1/2

On the form of losses of non-ferrous metals in slags. 136-9-6/14

the various metals in the slags were studied under different conditions and the results are tabulated and discussed. Their suggestions for reducing metal losses in slag include: careful preparation of the charge and maintenance of minimal oxidation; prevention of particles of oxidized charge finding their way into the slag; acceleration of the enlargement of liquid sulfide particles and their settling. They conclude that centrifuging is a promising approach for full-scale practice.

There are 2 figures, 3 tables and 6 references all of which are Russian.

ASSOCIATION: North-Caucasian Mining-Metallurgical Institute
(Severo-Kavkazskiy Gorno-Metallurgicheskiy Institut).

AVAILABLE: Library of Congress.

Card 2/2 1. Slags-Properties 2. Slags-Analysis 3. Instrumentation

LIPIN, B.V.

Scientific and technical conference at the Mining and Metallurgical
institute of Northern Caucasus. Izv. vs. ucheb. zav.; tsvet. met.
no.2:175-176 '58. (MIRA 11:8)
(Caucasus, Northern--Mining engineering)